THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. I. **Philadelphia, June 1, 1837.** **No. 22.**

For the Farmers' Cabinet.

The Observer---No. 8.

The observant and experienced Locke inquires, "Whoever, by the most cogent arguments, will be prevailed upon to disrobe himself at once, of all his own opinions and pretensions to knowledge and learning, which, with hard study, he hath all his lifetime been laboring for, and turn himself out stark naked, in quest of fresh notions?—all the arguments that can be used, will be as little able to prevail, as the wind did with the traveler, to part with his cloak, which he held only the faster." This appears to be the precise situation of "Subscriber." He acknowledges having "dissected a considerable number of horns, all from cattle said to have died of hollow horn, but *has not found any satisfactory evidence of waste or decay in the pith or bone of any of them.*" Yet, only *holding his cloak the faster*, he immediately says, "*as to the existence of the disease, I have found no reason to change my opinion.*"

I feel as much reluctance to engage in a war of words as he can possibly do; and I anxiously desire to avoid any thing which would induce him "to love his own opinions better than the truth." But I am willing to pursue the "investigation of facts," *let what will become of the cloak.*

In speaking of the horn, I said that "during life, the blood must circulate through the horn." By what "Subscriber" calls "a mistake," he understood this to mean, "during the life of the animal," and not to apply "merely to the life of the horn." I made life a necessary condition to preserve the circulation in the horn. This life could only be understood in relation to the part referred to. It was a *mistake* to understand the tail, or any other part, when the horn was spoken of. I do not, however, profess to be a correct linguist; and, exposed as I am, to the arbitrary exactions of an arduous profession, I am often obliged to write with more haste than is consistent with perspicuity of style.

"We now come (says "Subscriber,") to what Observer calls the pith of the controversy; does the pith of the horn waste, yea or nay?" He seems sorely vexed that I should have denied such a wasting of the pith; and quarrels, downright, with my challenge, for those who believe in it, to produce the only proper evidence in the case, *the horn so wasted.* These things are not strange. My denial has thrown the *onus probandi* on him; he must either accept the challenge, and sustain the position by proof, or abandon it as untenable. He has preferred the latter course. Having "dissected a considerable number of horns, all from cattle said to have died of hollow horn, but not having found any satisfactory evidence of waste or decay in the pith or bone of any of them," he very prudently "chooses not to accept the challenge;—first, because he does not know that he can readily find a hollow horn; and secondly, he desires to avoid controversy." The former is a very good—the latter a very bad reason for this choice. Facts furnish the very best means, either to prevent or terminate controversy. But it is always dangerous to persist in supporting an opinion without proof, *for the sake of controversy.* It is this which "induces people to love their own opinions better than the truth, or reasonableness of the case."

At page 308, second column, "Subscriber" has made a number of quotations, to show my "novel manner of treating the subject," by "*admitting the fact and then denying it.*"

This is also a "mistake." The term *hollow horn* is used in a generic sense, as the name of a disease, and not to express the condition of the horn merely. It is this *disease*, placed in contradistinction to a mere hollowness of the horn, which is denied. Hence. I have denied, and still do deny, the existence of *hollow horn*, and admit the possibility of horns becoming hollow *from ordinary caries*, like other bones. The horns are always hollow,—they may become more so by caries of the pith, without the animal having *hollow horn*. Polled, or hornless cattle, are supposed to be affected with the same disease. They are said, and with equal propriety, to have hollow horn, and they are treated much in the same way as horned cattle, by boring. "Subscriber" will now understand this seeming paradox. That *cattle have not always hollow horn when their horns are hollow.*

In the next column, "Subscriber" says "suppose I were to say to Observer, that there is something wrong in the generally received opinion, of bones being liable to waste and decay, &c. would he not say to me that this opinion was founded upon fact; that the testimony was ample to satisfy any unprejudiced mind? Would he not refer me to authentic history of diseased bones? And would he not be surprised if I refused to admit the fact?" Yes, most assuredly I would. But suppose "Subscriber" had given facts and reasons to prove the opinion erroneous, that he had pointed out sources of deception, sufficient to create strong doubts of its correctness, and on the faith of these, had called upon me for testimony in its support. Would he not be surprised if I should say to him, I have examined a considerable number of bones, all of which were said to be diseased and attended by the ordinary symptoms, but I have not found any satisfactory evidence of decay in any of them; yet, I have found no reason to change my opinion? Would he not tell me that opinions should be founded upon knowledge, and that knowledge be derived from facts? "Subscriber" has attempted an analogy between things totally dissimilar—ordinary caries and hollow horn. By confounding them together, he has completely broken the parallel. Once admit the analogy, and we shall have as many *hollow diseases* as there are bones in the skeleton, to become hollow by caries. In order to give him the full benefit of his argument, I pledge myself to renounce all scepticism in the case, whenever he shall produce the thousandth part of the evidence for the existence of hollow horn, by which the occurrence of ordinary bony caries is supported.

"Subscriber" says, "there is no doubt, but the pith of the horn wastes away sooner after the death of the animal, than any other bone. On examination, I have found a number of piths (in the horn house I suppose,) decayed and rotten toward the point, and the bone and the root of the horn perfectly sound. This fact favors the opinion, that the pith is more frequently the seat of disease than any other bone." The fact, as stated, is true of the *pith*, but does not apply to the *bone of the pith*. The pith is composed of a spongy bone, covered and lined with a highly vascular periosteum, and having its interstices filled with blood vessels. Towards the tip, the bone is more porous, consequently, there is a larger proportion of animal matter in that part to putrify, as "Subscriber" has justly remarked. It was this animal matter—not the bone which he found rotten. The inference he draws, "that the pith is more frequently the seat of disease than any other bone," requires the evidence of facts for its support. If he will make the examination, he will find that the end of the pith in the horns of sheep, is almost entirely made up of animal matter—much more so than in cattle—and hence, he would suppose, much more liable to decay;—yet, I have not understood hollow horn to be more common among sheep than cattle.

One more remark, and I am done. "Subscriber" thinks that the "general term (hollow horn,) given by ignorant people, to all the diseases of which cattle die in the spring season, is, perhaps, as near the truth as that excess of information which pretends to know that such a disease has no existence in nature." I plead guilty of the "*folly of pretending to a knowledge of things*," and am justly charged with that "*excess of information*," which denies the existence of *hollow horn*. I know it has an existence in the minds of what he is pleased to call "ignorant people," but having diligently sought for it in nature, and in the history of observed facts, without success, I must be permitted to doubt and to deny its existence, until evidence shall be brought to sustain it. "Subscriber" volunteered to advocate this opinion of "ignorant people," and to prop their tottering edifice, but its ruins have tumbled upon his own head. He has not proved the existence of hollow horn. He has not detected the folly of my pretending to a knowledge of things. He has not shown that it is "excess of information" for me to pretend to know more than "ignorant people." I hope that he will, therefore, "disrobe himself of all his own opinions and pretensions to knowledge," respecting hollow horn, "and turn himself out, stark naked, in quest of fresh notions," more consistent with observation, experience and facts.

Since my essays on horns were written, the editor of the Farmers' Cabinet has kind-

ly put me in possession of a recent, and very valuable English work, on "Cattle, their Breeds, Management and Diseases." I shall make a few extracts, confirmatory of the views held out in those essays.

"The horn of the ox is composed of an elongation of the frontal bone, covered by a hard coating, originally of a gelatinous nature. Its base is a process or continuation of the frontal bone, and it is, like that bone, hollow, or divided into numerous compartments or cells, all of them communicating with each other, and lined by a continuation of the membrane of the nose." p. 278. "Hence, it happens, that the frontal sinuses extend from the angle of the eye, to the very foramen through which the brain escapes from the skull, nay, as we shall see presently, to the very tip of the horn." p. 275. This is admirably shown by a section of the head and horn, p. 273. [We could not procure the engravings in season.]

"We have described the horn, at the base, as being very thin, it is quite as much so as the cuticle, or scarf skin, and it covers one of the most vascular bones in the whole body. No where else can the practitioner get so near to the circulating fluid—or to so great a quantity of it. He, therefore, puts his hand on the root of the horn, assured that he shall there have the precise temperature of the blood, and thus be enabled to judge of the degree of general fever, or constitutional disturbance." p. 280.

INFLAMMATION OF THE FRONTAL SINUSES.

The whole of this cavity is lined by a prolongation of the membrane of the nose, and when one part of it is inflamed, the whole is apt to be affected. This accounts for the very serious character which nasal gleet, a discharge from the nostrils, sometimes assumes in cattle. In the horse we think little of it, except it has a glanderous character, or is connected with considerable cough or fever. But the sooner a gleet from the nose of an ox is examined into, and properly treated, the better, for the inflammation is far more extensive than that which occurs in the horse.

After a little cough, with slight nasal discharge, we occasionally find the beast rapidly becoming dull, and drooping, and carrying his head on one side. Either grubs or worms have crept up the nostril, and are lodged in some of the sinuses, and are a source of irritation there; or inflammation, at first merely that of the membrane of the nose, and connected with common cold, has extended along the cavity, and is more intense in some particular spot, than in others; or has gone on to suppuration, and matter is thrown out and lodged there, and generally, about the root of one of the horns. The veterinary surgeon does one of two things, he either opens the skull at the root of the horn, with the trephine, or he proceeds in a more summary, and a better way—he cuts off the horn at its root. More than a pint of pus has sometimes escaped from the orifice; and, although there may not have been any suppuration, and throwing out of pus, yet the inflammation will be materially relieved by the bleeding that necessarily follows such an operation. The opening into the sinus, which is thus made, should, however, be speedily closed, or the stimulous of the atmospheric air will render the inflammation worse than it was before." pp. 275-6.

This is, evidently, what I have described under the head of *inflamed horn*. His recommendation to cut off the horn, seems inconsistent with that to close the orifice immediately. It is the only case in which I have advised, or admitted the propriety of boring. See Cabinet, p. 211. This is the only disease of the horns mentioned in the book. Hollow horn appears to be unknown to our trans-atlantic neighbors.

New-Garden, 5th mo. 10th, 1837.

For the Farmers' Cabinet.

Agricultural Implements.

NO. VII.

MACHINE FOR CUTTING GRASS AND GRAIN WITH HORSE POWER.

This machine is extremely valuable where the proprietor has large quantities of grass or grain to cut, on land sufficiently smooth and clear of stones, and other obstructions, but where there are such obstructions, the power of men can be employed to greater advantage. The first cost of a machine, and interest upon this, would be too great for each small farmer to own a machiue exclusively; yet several might combine, and arrange their business so as to keep one in use every day, during the season of cutting grass and grain; or a person who understands how to keep a machine in perfect repair, and use it to the greatest advantage, might find the business, as a constant employment, during the season, a profitable one; in such case he might furnish the machine, and receive a stipulated sum per acre, and the owner of the grass or grain furnish the horses, (which are generally idle, or have but little to do during this season,) and be at all other expense, except the machine and personal attendance upon it as aforesaid.

The average speed of a good machine, may be stated at one and a half acres per hour, this would be fifteen acres per day, allowing ten hours employment each day. The usual cost per acre, when cut by the power of men, including board, will average

about one dollar per acre for grass; now if we deduct one dollar per day for the expense attending the machine (this includes a man's board and the extra grain that two horses require beyond what they would when idle,) and we have fourteen dollars per day, as a compensation for the owner of the machine.

The following general description, will probably be sufficient to enable a person to build a machine. The cutter is a circular edge of steel, formed by several segments confined by screws upon a horizontal wheel, and turns between the two wheels that support the machine, one of which gives motion to the cutter by the aid of cog wheels, so constructed as to continue the motion while it moves up and down, over the irregular surface of the ground; this is produced by having the spur cogs on the shaft of the wheel, which carries the cutter, made of sufficient length, upon the shaft, to continue in gear, and at the same time move up and down from the lowest and highest points.

Sometimes there are two cog wheels used, and at other times three, the former called single, and the latter double gear. In the former case, the face cog wheel, axle or shaft, and one of the wheels which support the machine turn together, and the other wheel turns on a fixed axle; in the latter case, both the wheels that support the machine, turn on a fixed axle; one of them has a face cog wheel bolted on the side of the felloe; this works into a horizontal spur cog wheel, which turns another spur cog wheel on the shaft which carries the cutter. In either case, the wheels are so proportioned as to give a motion to the cutting edge, six or eight times faster than the forward motion of the machine. The shaft of the wheel which carries the cutter, turns on a pivot in a box at the lower end, and that box is attached to a slide, or to the axle of a pair of wheels, constructed so as to move up and down with the irregularity of the ground, and a sufficient length of the shaft above the cog wheel is made of a cylindrical form, to move up and down, and at the same time turn in another box. The lower side of the cutter rubs upon a stone, or other suitable substance to keep it sharp, as it turns round, and the horses go one before the other, at the edge of the uncut grass or grain. The driving wheel is prevented from sliding on the ground, by spikes or spurs in the periphery.

Chester co., Pa., 13th May, 1837.

POTATOES.—In Prussia the potatoe is cultivated with peculiar success;—as the stalk grows, the earth is heaped up, leaving only three leaves at the top; roots are thus greatly increased, and the produce is said to be astonishing.

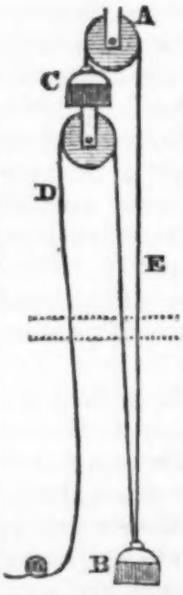
For the Farmers' Cabinet.

Alternating Elevator for the application of the Power of Men or Horses.

NO. II.

The following additional remarks on two former communications upon this subject, may be of service. By adopting this plan no ladder will be wanted, and the power will be more than double.

Fig. 78.



A is a fixed vertical pulley or wheel.

B one of the vessels which ascends and descends alternately, and may weigh 50 lbs.

C the other vessel that ascends and descends with a vertical pulley attached to it, both may weigh 195 lbs.

D E a rope made fast to B about one third the distance from one end; the short end E, of the rope is passed over the fixed pulley, and made fast to the other vessel C, which ascends and descends, and the other end D of the rope is passed over the movable pulley attached to the vessel C, and allowed to descend in a vertical direction.

Now suppose a man weighing 150 lbs. in the vessel B, on a load of 290 pounds, and drawing down at the rope D with his hands, applying a force of 100 lbs. or two-thirds of his weight, this reduces the weight of B from 490 lbs. to 390 lbs., and adds 200 lbs. to C,

C—395 lbs.,
B—390 lbs., } 5 lbs. in C more than B, will

be sufficient to cause a preponderance, if all the parts be properly constructed, if not, B may be made heavier, and a still greater force applied to C by the rope D.

Thus B rises to the lower dotted line, and C descends at the same time to the upper dotted, three or four feet above the lower one. The load 290 lbs. is discharged, and

B—50 lbs. and the man—150 lbs. { 50 / 150

200 lbs., which is 5 lbs. more than C—195 lbs., this extra weight of B more than C, causes B to descend to the lowest point, and at the same time C ascends to the highest point.

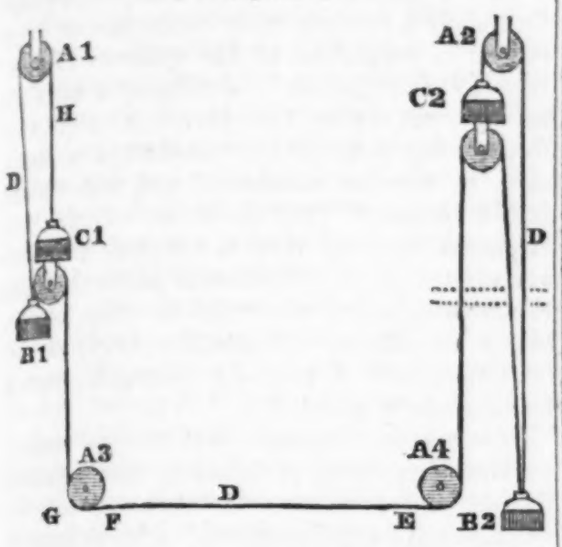
When horse power is desired to be used with a machine constructed upon this principle, the following described parts may be used, viz:

A 1, A 2, A 3, A 4, are four vertical fixed wheels or pulleys.

B 1, B 2, are two vessels which ascend and descend alternately; each may weigh when empty 30 lbs., and be loaded with 570 lbs.

C 1, C 2, are two other vessels, each with a moveable pulley attached, which ascend and descend alternately, each may weigh 20 lbs.

Fig. 79.



D D D a rope with one end made fast to one movable vessel C 1, and the other end to the other C 2, and passes over the two upper fixed pullies A 1, A 2, and is connected with the other movable vessels B 1, B 2, and passes over the two movable pullies attached to C 1, C 2, and under the lower fixed pullies A 3, A 4.

Now suppose a horse attached to the rope at E and moving to F, drawing with a force of 200 lbs., B 2=570 lbs. will be raised to the lower dotted line, and C 2 with the movable pulley will at the same time descend to the upper dotted line, two or three inches above the lower one, and B 1 will at the same time descend to C 1, and C 1 will ascend to H. This calculation allows five per cent. for the friction of the pullies, and inflexibility in the rope, and supposes the horse or other moving power, to pass through thrice the space that each of the vessels B 1, B 2, C 1, C 2, does, and also supposes a load of 570 lbs. raised and discharged at the highest point from B 1 and B 2, each time that they ascend; but suppose one of them to ascend and descend loaded, and the other to ascend loaded with 1140 lbs., and descend empty, or increase the moving power to four horses—800 lbs., at a velocity of two miles an hour, and multiply 570 by 4 will give 2280 lbs., raised by each vessel B 1, B 2, at each ascent or twice this amount—4560 lbs., by one of them, when the other ascends and descends loaded. I have given certain specified weights in order to explain the principle, but these may be varied with circumstances, for instance, where the friction is greater than here supposed, the load to be raised may be less, compared with the moving power.

Chester co., Pa., 20th May, 1837. P.

For the Farmers' Cabinet.

The Black Fly.

In some sections, the black fly, known to our farmers generally, is found extremely troublesome and injurious. I have myself witnessed its bad effects. A remedy has been proposed in some of the papers. It is to sow a bushel of dry ashes to the acre on vegetables, subject to the inroads of this insect. The ashes to be applied while the dew is on, or while the vegetables are moist. The application should be made when the plants are from two to four days old. This top dressing, while it prevents the ravages of the fly, stimulates the growth of the plants. I have tried the experiment for two or three years past with my turnep-field, and invariably with the best success. Should a rain immediately succeed the sowing of the ashes, the application should be immediately repeated.

A Bucks County Farmer.

Extract of a letter to the Editor, from a gentleman in Indiana county, Pa., dated,
May 20, 1837.

"A short time since I subscribed for the Farmers' Cabinet, from a desire to sustain an agricultural work published in our State; at the time of subscribing I was unacquainted with the publication, but having lately received it from the thirteenth number, and finding it one of merit, and worthy of general patronage, I have interested myself so far as to recommend it to some of my friends and neighbors, and as the result of my efforts, I herewith send you the names of thirty subscribers, with payment in advance. You will also please send me the work from the commencement, as I wish to preserve it entire for binding.

I hope that this attempt to establish an agricultural newspaper will be successful. I have long regarded it as a disgrace to Pennsylvania, one of the first agricultural states in the Union, that no Agricultural Journal was published within her borders. I am rejoiced that you have made the effort, and not only so, but that the Farmers' Cabinet, so far as I have examined it, is calculated to promote the interests and welfare of the State, as I hold it to be a true principle that any plan by which the agriculture of a country is advanced, and its staple productions increased, tends to benefit the community, both individually and collectively. I regard the "Cabinet" as eminently calculated to advance the interests of agricultural science, and so long as it is conducted with reference to *utility*, it will afford me great pleasure to recommend it—and I hope that the farmers of Pennsylvania, will give it their cordial and hearty support."

For the Farmers' Cabinet.

Importance of Irrigation.

BY SAMUEL HAINS.

The Memoirs of the Philadelphia Agricultural Society, contain many valuable papers on Agricultural Science, but unfortunately the circulation of the volumes published by the Society, (at long intervals,) has been very limited. On looking over a volume published in 1825, my attention was forcibly arrested by an article on the importance of irrigation. Since that article was penned, great and important changes have taken place in the agriculture of the country—many farms then almost ruined by a bad system, have been reclaimed, and not only present evidences of great fertility, but have abundantly remunerated their proprietors for all the expense and labor bestowed upon them. Yet there is still room for much greater improvement, not only in the immediate vicinity of the city, but throughout the whole country. The following are extracts from the communication referred to, and you are requested to give them a place in the Cabinet, at your earliest convenience.

Cast your eye upon a map of Pennsylvania, and within a range of thirty miles around this city, you will see one of the best watered districts in this country; a district closely intersected with numerous streams of the finest water, most of which I know from actual levels taken in various directions, have their sources at an elevation of from 300 to 500 feet above the level of the tide. The great elevation from which these streams flow, besides being favorable to a great supply of water, afford an opportunity of spreading it over a great extent of surface.

Within the limits above mentioned, and from which a great portion of our small articles for market are produced, I have no hesitation in saying, there are 50,000 acres of good arable land over which water might be commanded at pleasure, if the farmers would unite in an arrangement to convey it from one farm to another, furnishing each by turns with a copious supply two or three times a week.

I had an opportunity of seeing the good effects of an arrangement of this kind in the Island of Maderia, where, although no rain falls from the month of May to October, the finest vegetables of all kinds are produced in abundance by means of irrigation. Channels for conducting the water are made at great expense, and carried over the roughest grounds for miles together: the distribution of the water (I was informed) was fixed and regulated by the laws of the Island; similar regulations connected with irrigation exist in different parts of Europe.

Irrigation is one of the most ancient practices connected with agriculture; and in some countries even at this day, is deemed of the first importance, and without which their population could not be supported.

In the early settlement of this country, and for nearly a century afterwards, farms were valued in proportion to the quantity of land capable of irrigation. In offering a farm for sale or rent, during that period, no man ever forgot to mention, that it "contained so many acres of watered meadows," and that "more might be made:" but since the introduction of plaster, and red clover, watered meadows are almost wholly neglected, particularly in the farming districts nearest the city, where, above all others, the practice ought to be continued, and if properly managed, would be immensely profitable.

It is worthy of remark, that in many remote parts of this state, particularly those settled by Germans, and their descendants, watered meadows are highly valued. I am informed, it is a prevailing opinion among them, that the disease called *slavering* in horses and cattle, does not occur in those fed on the hay or grass from watered meadows, and I am inclined to think there is truth in the opinion, for I remember well when the disease was unknown in the neighborhood where I was brought up, viz. a few miles this side of Downingstown: hay was then seldom made from any other, than ground occasionally overflowed with water.

It is an erroneous opinion, that spreading water over land renders it unfit for the plough, or growth of grain. It is in many situations the cheapest method of enriching and restoring worn out lands than can be resorted to, and upon a dairy farm its advantages must be incalculable.

In the climate of our country, experience shows, that we may regularly look for a period of great drought between the months of June and October; the present season is another proof, that however abundant and seasonable the rain may be in the fore part of summer, and however cheap, and plentiful, butter, vegetables, and other things may be in the early part of the season, yet a few weeks of dry weather will have the effect to increase the price upon the consumer, while the articles are of inferior quality, and scarcely to be had in the market.

There is no way of counteracting the effects of drought so effectually, as by spreading water over the lands. Every kind of grass, grain, or vegetable may be improved or preserved by a skilful application of water; even fruit trees may be benefitted, and the fruit improved by it. The quality of butter, as well as the quantity in dry seasons, is greatly improved upon watered meadows:

and garlic, and many other weeds so injurious to the dairy, are lessened or wholly destroyed by irrigation. The practice which prevails in our country of draining the lands, with a view to get rid of the water, as though it were a nuisance, is attended with injurious consequences, particularly in a dairy farm. Cattle and live stock of most kinds requiring free access to water in dry warm weather, and the quantity drunk is much greater than most people imagine; for milk cows, it ought to be clean and cool, if possible, during summer: very few dairy farms in the neighborhood of the city, are as well provided as they ought to be in this respect.

Strangers, particularly those from France and Germany, in passing through our part of the country, while they see much to admire in the management of our farms, must be struck with surprise at our neglect, I might say contempt, of those beautiful streams of water with which almost every farm is supplied. In the rapid progress of agricultural improvements, the uses to which they might be applied, seem to have been overlooked: the time however is approaching, when they will be carefully improved, and their skilful management rank among the chief cares of the husbandman.

Among the means that might be devised for improving the produce of the dairy and garden, and rendering their supply regular and constant, irrigation stands pre-eminent. Lands may be manured, and judiciously divided, the exact time of planting may be known, the best kind of seeds, the best cattle and stock may be provided, but in a drought these avail nothing: "when the ground is parched, and the clouds give no rain, the hopes of the husbandman lie prostrate."

A copious stream of pure water issuing from an elevated source, is of inestimable value to the farmer, if properly managed; but like every other valuable article, it requires great skill in using it to the best advantage. In Europe, much ingenuity and talent have been employed on the subject of irrigation; the engines for raising water, canals for conveying it, and the time and manner of spreading it over the ground, have been studied with great care and brought to great perfection. In this country we have much to learn; facts might be collected in abundance to prove, that much good has been effected by it, and it would also be easy to show, that much evil has arisen from its neglect.

Whenever irrigation comes to be successfully used, it must be first under the direction of men experienced in the art; water used at an improper time or in a slovenly manner does more harm than good. I remember to have seen a few acres of meadow, over which spring water was judiciously spread, produce three crops of good hay in one summer: the water was collected in a pond, and passed rapidly over the ground at stated periods. The best method of watering gardens and orchards, is unknown in this country, although it has been partially and successfully tried in some instances within my knowledge. The nature of our climate, and the increasing demand for fruits and vegetables of good quality in our market, will compel our farmers to study and practice irrigation from the same necessity, which forty years ago compelled them to learn the best method of collecting and using manures.

In many parts of the country a strong prejudice exists against irrigation, lest it should by increasing soakage and evaporation injure and destroy the mills. This I think is a mistake, for the absorption would go to replenish the springs, and the evaporation would soon descend in showers: nothing is lost; the greater the surface of water exposed to evaporation in any country, the greater and more frequent will be the showers. I take it therefore to be sound reasoning, that irrigation would increase, rather than diminish the streams of water.

[Mr. H's description of the country in the vicinity of our city, is, with but few exceptions, regretfully true; and, as he alleges, "great and important changes" must take place, adapted to the demands induced by a growing population, accelerated by circumstances now in incipient progress. Let grain, and the hitherto common commercial articles of this kind, be brought, in ever so great abundance, from distant places, the lands within reach of indispensable and perishable supplies, must be devoted to the daily wants of a large city; and most of them cannot be brought from great distances. The objections, unreasonably fostered by theoretical foreboders, that the lands near the city, will depreciate when remote supplies of field culture glut our markets, are contrary to all experience in Europe, and will so be found here. The most encouraging *facts* could be produced, to prove that cities and population increase, and towns grow into cities, as the means of subsistence are in plenty. Those means are necessarily in demand, as cities extend, and population, of course, increases; the one stimulating and inducing the other. It can be indubitably shown, by incontestible evidence, that lands in the immediate neighbourhood of such cities, rise in value, with a rapidity which sets at nought all specious adverse anticipations.

R. PETERS.]

Radishes.

This root being liable to be eaten by worms, the following method of raising them is recommended in the *Farmer's Assistant:*

"Take equal quantities of buckwheat bran and fresh horse dung, and mix them well and plentifully in the soil by digging. Suddenly after this, a great fermentation will be produced, and great numbers of toad stools will spring up in forty-eight hours. Dig the ground over again, and sow the seed; and the radishes will grow with great rapidity, and be free from the attacks of insects. They will grow uncommonly large."

From Dickson's Live Stock and Cattle Management.

Principles and Practices

IN BREEDING NEAT CATTLE, AND OTHER SORTS OF LIVE STOCK.

With a view to the improvement of the several breeds and kinds of live stock, different principles, practices, and systems of management, have been proposed; but those which appear to be the most suitable, correct, and proper for the purpose, to have the greatest foundation in practical experience, and to be the result of the latest and most full inquiry on the subject, are those given by Sir John Sebright, in his valuable letter on "the Art of improving the Breeds of Domestic Animals." This work, together with the remarks of several judicious farmers and breeders, who have investigated and explained the principles and practice recommended therein, establish beyond all doubt the following facts and axioms:

1. That the males and females, intended to breed together, should be provided with particular attention to the good or bad qualities of each or "in reference to each other's merits and defects."

This is considered essentially necessary, as it is not always found, "by putting the best male to the best female, that the best produce will be obtained;" as should they each of them have a disposition or inclination to the same fault or imperfection, in however slight a degree, it will commonly preponderate and prevail to a much greater in the offspring, and thus decrease their value. The same faults or defects in the different sexes are unquestionably to be equally as much avoided and prevented, as the excellencies and perfections of them are to be united and combined.

2. That a breed or variety of any sort of animals may be considered "to be improved, when any desired quality has been increased by art, beyond what that quality was in the same breed, in a state of nature."

The increasing the natural good qualities and properties of different breeds and sorts of animals, should be the first consideration of the breeder, such as "the swiftness of the race horse, the propensity to fatten in cattle, and the fine wool in sheep, improvements which have been made in particular varieties of the several different species to which these animals belong." By such means, improved values are given to different sorts of animals as live stock.

3. That after a breed or variety has been rendered, in the above manner, as perfect as it is capable of being made, "what has been produced by art, must be continued by the same means; for the most improved breeds will soon return to a state of nature, or perhaps defects will arise which did not exist when the breed was in its natural state, unless the greatest attention is paid to the selection of the individuals which are to breed together."

The same care, nicety and exactness must be bestowed, in keeping up, as in forming the improvement itself; the smallest inclination or tendency to deviation or imperfection in the stock is to be attended to the instant it begins to make its appearance, in order that it may be counteracted "before it becomes a defect," and be corrected before it has attained too high a degree, but at the same time without carrying correction too far on the contrary side.

4. That full and proper regard is not only to be constantly had to the "qualities apparent in animals selected for breeding, but to those which have prevailed in the race from which they are descended, as they will always show themselves, sooner or later, in the progeny, it is for this reason that we should not breed from an animal, however excellent, unless we can ascertain it to be what is called *well bred;* that is, descended from a race of ancestors which have, through several generations, possessed, in a high degree, the properties which it is our object to obtain."

It is of the most essential importance, that the animals selected for breeding be not only *good* in themselves, and capable of being traced to parents which are the most pure and perfect of their kind, but that every intervening link in the chain of their ancestry should likewise have been good.

5. That "if a breed cannot be improved, or even continued in the degree of perfection at which it has already arrived, but by breeding from individuals so selected as to correct each other's defects, and by a judicious combination of their different properties, a position that will scarcely be denied, it follows that animals must degenerate by being long bred from the same family, without the intermixture of any other blood, or from being what is technically called *bred in and in.*"

Therefore, connecting animals for breeding that have too near or close a relation in blood to each other for a length of time should be avoided, though animals of different families of the same sort may often be united with propriety and advantage.

6. That "if the original male and female were of different families, by breeding from the mother and the son, and again from the father and the daughter in the same way, two families sufficiently distinct, might, it is supposed, be obtained; for the son is only half of the father's blood, and the produce from the mother and the son will be six parts of the mother and two of the father."

In this manner of combining them, they

would not be sufficiently near in their kindred or blood as to deteriorate their offspring or stock.

7. That though "the occasional intermixture of different families" is believed "to be necessary," it is not "by any means approved of, to mix two distinct breeds, with the view of uniting wholly the valuable properties of both. This experiment has been frequently tried, but has, it is believed, never succeeded. The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued.

Thus, were it possible, "by a cross between the new Leicestershire and Merino breeds of sheep, to produce an animal uniting the excellencies of both, that is, the carcass of the one with the fleece of the other, even such an animal so produced would be of little value to the breeder; a race of the same description could not be perpetuated; and no dependence could be placed upon the produce of such animals; they would be mongrels, some like 'the former,' and some like 'the latter,' and most of them with the faults of both."

In the intermixing of different families of animals as crosses, much care and nice attention must be bestowed not to unite such as cannot have the valuable qualities or properties which they may possess, or an improvement of them perpetuated, and afterwards certainly produced in their offspring.

8. That a particular formation *generally* indicates a disposition to get fat in all sorts of animals; but this rule is not *universal*, for we sometimes see animals of the most approved forms, who are slow feeders, and whose flesh is of a bad quality, which the graziers easily ascertain by the touch. The disposition to get fat is more generally found in some breeds than in others. The Scotch highland cattle are remarkable for being almost all quick feeders, although many of them are defective in shape. The Welch cattle have but little disposition to get fat; not from being particularly ill-shaped, but because they are almost invariably what the graziers call *bad handlers*."

Consequently, such animals as are well shaped or approach nearest to the approved form, and which have the most proper *feet* in the flesh, should be employed in the raising and improving of such stock.

It cannot therefore be too strongly impressed upon the attention of the breeder and improver of different sorts of live stock, to be most particular in a just and suitably exact selection; in putting animals together that are not too closely related in their kindred, and in crossing the families and breeds of different kinds in the most fit and correct manner.

Worms on Fruit Trees.

We find the following statement in the Lansinburgh Gazette:

Mr. Stephen Beach, who resides in Ferrisburg, Addison county, Vt., tried the following experiment with complete success: He took a slip of Birch bark about the width of three fingers, this he put around the trunk of the tree, two or three feet from the ground, and fastened the ends together, by means of a small nail driven into the tree. This bark he besmeared with the skimmings of a pot where salt pork, &c. had been boiled. The worms as it is well known spin down from the trees every night, and when they attempt to ascend the tree, they are arrested by the bark, or rather by the grease on it. They approach this and can pass no further. They gather in large quantities below this strip of bark and remain for a season and then disperse; some who attempt to cross the bark, would be found stretched out at full length and dead. It seems probable the grease and salt together destroys them. By this simple contrivance this gentleman succeeded to rid his orchard of every worm in a very short time. He informed me that one of his neighbors applied grease, or rather oil, on the tree itself; this he said prevented the worms from ascending, but it will nigh destroyed the trees. It is believed that when birch bark cannot be obtained, that pasteboard would answer the same purpose.

Agriculture.

"How forcibly," exclaims the Niagara Democrat, "how forcibly should the present scarcity of all the productions of the earth, tend to draw the attention of the owners or cultivators of the soil to the necessity for exertion to introduce a system of more industrious and thorough husbandry. True the seasons have been unpropitious—but the present crisis in agricultural productions throughout the country, is in a great degree to be attributed to another cause—a neglect of agriculture. Our whole social system has been diseased by the all-absorbing business of SPECULATION. It has drawn the mechanic from his work shop, the professional man from his duties, and enticed the tillers of the soil to look for wealth in the inflated bubbles of artificial value, and build their hopes upon the sandy foundations of imaginary sudden gain, rather than by the patient but sure process—the use of the plough. Among the types that the disease has put on, was one which created a species of contempt for ordinary pursuits of industry. Those who have been wrapt in a cloud of airy nothing, have looked down upon plodding labor, as if it was out of fashion, obsolete, and unnecessary.—

But the disease is working out its own cure; the whole machinery of the social fabric, so jostled and thrown out of gear, by the excitement of sudden and unnatural gain, is undergoing repair. A salutary retribution has inflicted the penalty of transgression, and is enforcing the fiat of the Creator, founded as are all His decrees, in immutable justice.—The retrospection of the last three years, will in the end do more to convince us that patient industry is the only natural healthy means of gain—that, aside from this, all dependence is uncertain and untenable—than would the preaching of an army of political economists. The basis of all industry, of prosperity, must be the pursuit of agriculture. That neglected, it is impious to charge upon the seasons that portion of misfortune which is clearly attributed to our own errors. All the productions of the earth are extravagantly high; the consumer is threatened with starvation; and the producer is not bettered by the emergency, for he has but little to sell—he has neglected his fields, has left the most dignified and exalted of all human pursuits, to chase the retreating shadow of unnatural gain! Let us profit by the bitter lesson of experience; let us suppose, for such reliance is at all times the dictate of wisdom, that the season now opening upon us is to be one of plenty, that the earth will give good returns for all that is committed to its charge—and then, if we come short of abundance, we shall at least have the consolation that we have neglected no duty necessary to the accomplishment of our designs."

How to Improve a Poor Farm.

Richard A. Leonard, of Middletown, N. J., has furnished us an interesting account of his manner of improving a worn-out farm, and of the sale of its products the last year; and we regret that from the great accumulation of matter on hand, we cannot give his letter in detail. We are obliged to content ourselves with a brief abstract of material facts.

Mr. Leonard came into possession of 90 acres of cultivated but exhausted land in May 1833. In that year the sale of its products amounted to $550 88; in 1834 the sales amounted to $718 05; in 1835 to $1,125 04; and in 1836, notwithstanding the unfavorable season, and the failure of most of his staple crops, to $1,166 13—thus more than doubling its products by judicious management, in three years. His expense during the last year, for labor, dung and freight, amounted to $254 72—thus leaving him a nett profit on his farm of $912 41—or more than $100 per acre per annum. We will quote Mr. Leonard's statement of the means he adopted to thus double the fertility of his soil.

"My farm," says he, "was in so low a condition that it would not produce more than ten bushels of rye, or twenty of corn per acre; and as I had no other income but what I could make upon this poor farm, I set about farming in earnest. I found it was in vain to attempt improvement without manure, so I contrived to get about 400 loads a year, 300 of which I made in the following manner. I have marl, though of very inferior quality. I cart about 100 loads of this into my barn yard, and by yarding my cattle upon it through the season, contrive to increase it to 200 loads. I also cart about 50 loads to my hog pen, on which I keep my hogs the year round. In this way I got 100 loads more, which is excellent for potatoes, corn, &c., and as my farm is situate near the bay, I obtain from New York annually, from 50 to 75 loads of the best stable dung, at about $1 per load on delivery, and by mixing it with the earth, &c. make up the 400 loads. By this treatment I find my land improve rapidly, and my income in like proportion. But I am sorry to say there are many farmers among us who are still pursuing the old land-killing system, scarcely making both ends meet. I might say something concerning the beneficial results of underdraining, and of lime as a manure; but I conclude for the present."

This communication affords a worthy example of prudent industry and good management, and shows that even a poor farm, well managed, may be rendered more productive than many a good farm now is, under bad management.—*Albany Cultivator.*

Useful Instructions Regarding the Milking of Cows.

The operation of milking is performed differently in various parts of the country. In some, the dairy maid dips her hand into a little milk, and by successively stripping the teat between the finger and thumb, unloads the udder. The plan however, is attended with the disadvantage of irritating more or less the teat, and rendering it liable to cracks and chaps, which are followed by inflammation, extending to the rest of the quarter. This accounts for the disease occurring more frequently among the cows under the charge of one milker than it does in those which are under the charge of another; and, as this practice is more common in some parts of the country than in others, it also accounts for the disease being more common in these parts. This plan of milking where the irritation is not sufficient to excite the extent of inflammation to which I have alluded, frequently produces a horny thickening of the teat, a consequence of the cracks and chaps, which renders it more difficult to milk than when in its natural state; and at the same time predisposes to inflammation, when any case

occurs to set it up. These effects may be, and are almost entirely avoided, by the more scientific plan of milking adopted in other parts of the country, where instead of drawing down or stripping the teat between the thumb and fingers the dairy maid follows more closely the principles which instinct has taught the calf. (The calf jerks its nose into the udder and forces down the milk.) She first takes a slight hold of the teat with her hand, by which she merely encircles it, then lifts her hand up, so as to press the body of the udder upwards by which the milk escapes into the teat, or if (as is the case when some hours have elapsed between milking times,) the teat is full, she grasps the teat close to its origin with her thumb and fore finger, so as to prevent the milk which is in the teat from escaping upwards; then making the rest of the fingers to close from above downwards in succession, forces out what milk may be contained in the teat through the opening of it. The hand is again pressed up and closed as before, and thus by repeating this action, the udder is completely emptied, without that coarse tugging and tearing of the teat which is so apt to produce disease.—*Quar. Jour. Agri.*

From the Memoirs of the Philadelphia Society.

Utility of Lime in preserving Fence-posts.

BY WM. WEBB.

Accident in some instances, has led to the discovery, that lime applied to wood, preserves it from decay. The white-washing of fences is practised, more as a substitute for paint, and for appearance sake, than to prevent decay. Even this superficial mode of applying lime, is of some use in preserving wood. Having full confidence in the efficacy of lime, as a preservation of wood, to make fence-posts less subject to rot, I have this season, for the first time, used it as follows: I provided a number of narrow boards, about three feet long of various breadths, and one inch thick, with a hole in the end of each. When the hole in the ground was ready for the reception of the post, some lime was put into it; on this lime the post was placed; some of the narrow boards were then selected, and placed close to and around the post in the hole. The ground was then rammed into the hole, after the usual manner; and when filled, the boards were drawn out. This is done with greater facility, by putting a stick into the hole in the upper end of the board, by which it may be raised by a lever or prise, if too fast to draw out otherwise. The boards being all removed, fill the space they occupied with quick lime; if but partially, it is better than if totally slaked, because as it slakes it will expand and make the posts stand very firm. If altogether slaked, it also swells and makes the post quite secure. From three to five posts, with hewn or uniform butts will require one bushel of lime. Boards to surround the post half an inch thick (and perhaps this thickness of lime may be sufficient) would not take quite half that quantity. The lime is all the additional expense, except the extra labor (which is very trifling,) to be incurred by setting a fence, with that part of the posts in the ground enveloped in lime.

To prevent the ground from adhering to the posts at the surface, and occasioning their decay, this part being the one which generally first begins to rot, lime-mortar is applied, plaistering round the posts with an elevation adjoining to the wood. Into this mortar, gravel was pressed, to prevent the rains from washing it away. This mortar may be applied at any time most convenient after the fence is made.

WILLIAM WEBB.

From the N. A. Review.

Sugar Maple--Sugar.

Next to the pines and oaks, there seems to be no tree in the country of more extensive celebrity than the sugar maple. The extraordinary neatness of its appearance, and the beauty of its foliage, which in summer is of the liveliest green, and in autumn assumes the richest and most glowing red, are sufficient to recommend it as a beautiful ornament in our gardens and avenues. The bark is remarkably smooth, and the tree is infested, we believe, by no insect, nor subject to any maladies. The branches are disposed with much regularity, though without stiffness, and so arranged, that their usual outline is an elegant oval. It is to this tree we are chiefly indebted for the beautiful curled and bird's eye maple, employed in cabinet work, which rivals, if it be not admitted to surpass in brilliancy and richness, the finest woods of tropical climates. But the sugar maple derives its chief reputation, as well as its name, from the qualities of its sap. A large portion of the sugar used in many parts of the country, the western districts of Vermont and New York for instance, is derived from the maple. Michaux remarked, nearly thirty years since, that at least ten millions of pounds of this sugar were then annually made in the United States. This quantity is far less than might be procured, from the same source, in case of necessity. According to Dr. Rush, the northern part of New York and Pennsylvania alone, contained at the same period, thirty millions of sugar maple trees; and if we suppose each tree to yield, on an average, from two to four pounds of sugar annually, the pro-

duct would go far towards supplying the whole consumption of the country.

The maple sugar can be made of a quality equal to the best imported. We have seen it formed into very good loaf sugar. It is, however, in a brown state that it is generally used; and, except in the districts where it is produced, it is less agreeable to the palate of consumers generally, than the product of the cane. To manufacture it, requires a great expense not only of labor, but of fuel; and hence it probably cannot be sold, at a distance, for a price which will enable it to compete with the imported article. The sap of the tree, or maple juice, as it is called, is greedily coveted by wild and domestic animals, who break through enclosures for the sake of obtaining it, and is generally an agreeable and wholesome beverage. We have been informed, however, of one instance, in which it is proved to be of a highly intoxicating quality. This circumstance occurred about thirty years since, in the western part of the state of New York. All the sap procured from the maple trees of an extensive district, was found to have undergone a vinous fermentation; and children who drank it freely were in some cases rendered delirious for two or three days. We have heard of no other instance of this phenomenon, nor have we learned that any probable explanation has been given of its cause.

Profits of Cow Keeping.

Mr. Holmes,—No branch of husbandry is more profitable than the keeping of cows, if properly managed. We have but few farmers in the state of Maine who make great profits by the dairy. Many farmers among us are solicitous to improve their breeds of cows, and some raise considerable quantities of good roots, with which to feed them during the winter. This is all very good, so far; but what is the treatment of cows during the summer season, the time when all, or nearly all, the profits are obtained? Cows kept in dry, short pastures, in summer, will not be profitable to their owner, however much ruta baga, mangel wurtzel, or carrots, have been fed out to them during the winter. I believe it to be a fact, that cows generally, (some few exceptions,) are shamefully stinted in their food during the summer, in our state, notwithstanding our grazing lands are excellent.

I believe that the most profitable mode of keeping cows through the summer is by soiling, or feeding them with grass in the barn or yard. This may frighten some farmers, and excite the ridcule of others; but I think it will be granted that he is the best farmer who realizes the greatest number of dollars and cents from a given quanity of land, with the least amount of labor. Many farmers pride themselves on raising great crops; and 100 bushels of Indian corn have been raised on a single acre. This is a great profit, but I believe that 3000 bushels of ruta baga may be as cheaply raised, take one year with another, as 100 bushels of corn. Three thousand bushels of ruta baga will give about a bushel and a half a day, each to six cows throughout the whole year. It is easy enough to see that cows fed in this way will be in excellent condition, and yield immense quantities of butter and cheese.

The method of soiling as described by Dr. Dean, was to feed cows with new mown grass: an acre of rich ground, he says, will summer a number of cows. A little hay or grass will indeed be necessary at all times of the year, but I believe roots should be raised in great abundance, and be made the chief article for feeding milch cows throughout the year as far as practicable. Cows do not generally yield great quantities of milk till June; but by supplying them liberally with roots they may be made to yield as much milk in March, April and May, as any part of the year. as Farmers, whose cows calve early, and who have an abundance of roots, may make prodigious quantites of butter and cheese early in the spring.

Farmers in Europe and in this country have practised soiling their cattle during summer, and those who have had experience in this mode of summering, have declared it to be a much cheeper and more profitable mode than grazing.

The practice of soiling cows in our state would certainly make a great saving of land, and of course it would give to farmers a larger pasture for sheep—more land could be spared for the culture of wheat—and last, not least, more land could be spared for the cultivation of mulberry trees.

Immense quantities of manure could be made, especially by those farmers who are not afraid of a little labor in hauling muck, loam, and other materials calculated to absorb the urine of animals, which is most commonly entirely lost.

Our climate is extremely well calculated to keep butter and cheese in an excellent condition.

The State of Maine may be the first dairy country upon earth—our butter and cheese might be of such quality that it would be eagerly sought after throughout the United States and the British provinces—our farms might easily acquire wealth and independence, if there was a little more enterprise.—*Maine Farmer.*

The peach trees are said, by the Hagerstown Torch Light, to have been severely injured.

Long and Short Scions.

Which are best, long or short scions? We have always supposed that a short scion, having two or three buds upon it was sufficiently long for the purpose of engrafting. We do not know now, but they are equally as good as those which are a foot in length. We have, however, seen and watched the progress of some that were uncommonly long, set two or three years ago, which have done uncommonly well, while some short ones, set the same season, have not done so well. It is possible, however, that the difference may be owing to some other cause. It is well, however, to watch and observe the operations of nature as she carries on her silent but interesting operations around us, and endeavor to treasure up as many facts as possible, and draw such conclusions as facts will warrant to guide us in future operations. We hope that those who may be engaged in grafting, will experiment a little and note the result. By the way, we are inclined to think that the mode of engrafting by cement is not so sure or safe a method as the old mode of using clay composition. We may be mistaken in this, but we are induced to draw this conclusion from observation. The cement does not so thoroughly protect the scion from the extremes of heat and cold as does the composition, and this may be one reason why it has not succeeded so well in this region. Many, however, still prefer it, and think it is equally as good as the other, and much more expeditiously applied.—*Maine Farmer.*

From the American Silk Grower and Agriculturist.

MR. COOKE:

Dear Sir,—As "one of the farmers" has requested the "Reverend gentleman!" (whose statement concerned a half acred of corn that produced 70 bushels of ears,) to give some explanation of the mode of cultivation, you are at liberty to publish the following:—

My object, in making the statement alluded to, before the Agricultural meeting, was to show the importance of *early planting* on our sandy soils, and the *benefit of ashes* on such ground.

In answer to the inquiries of "one of the farmers," I remark:

1. That it is not known "how long the land had been cleared;" it was a pasture when I purchased it.

2. The corn was planted "in rows one way," about 2½ feet apart, and the hills in each row were less than 2 feet apart.

3. The ground was ploughed about 7 inches deep the October before, and not at all in the spring. It was harrowed, and then furrowed for planting.

4. I usually put 5 or 6 kernels of corn in a hill; and at first hoeing reduce the plants to four by pulling up the least thrifty.

5. The manure used was a *compost* of decayed chips, clay and barn-yard manure—one shovel-full to a hill.

6. The ashes were applied some days before the first hoeing.

7. The season was pretty dry in July, but as the ground had not been ploughed in the spring, there was no injury from the drought.

8 and 9. The corn was hoed three times, and "hilled" but little.

10. No instrument was used in dressing it but a hoe. Ploughing between corn is always injurious to the roots. It also, hurts potatoes in dry seasons by making the ground more dry.

11. A part of the stalks were cut for my horse, and the rest were left till the corn was ripe.

Having thus disposed of the questions proposed, I will add, that I have uniformly found that *autumnal ploughing* is the best for our plains, with harrowing in the spring. The drought never injures a crop on land thus prepared. Even beds for beets, carrots, &c. should be prepared in the autumn, and only raked in the spring. The roots grow *straighter* and *longer*, and without the radicles that are so apt to injure then.

As a proof that potatoes do best with *autumnal ploughing and early planting*, I would mention, that on a piece of land in my garden 5 rods by 4½ I raised 86 *bushels in one year*. The land was not even furrowed in the spring; but holes were dug for the manure the last week in April, and planted immediately. They were planted "in hills" at about the same distances as the corn above mentioned, and, after the first hoeing, a small quantity of ashes upon a narrow shingle put upon each hill around the potatoes. They were hoed three times.

Another fact that is important, is, *the earlier* the potatoes are, *the better they are* for summer, autumn, winter and spring. Those whose tops are green when the frost comes, are positively unhealthy. *It is a great object to have them ripen in hot weather.*

Yours respectfully,

Z. S. BARSTOW.

Keene, 20th April, 1837,

To Destroy Ticks on Lambs.

Boil tobacco in a large kettle; then put some of the liquor in a tub, adding water to it, and after wetting a lamb, let a boy hold him, standing on his feet in the tub, then squeeze out all the liquor you can. A man and boy can wash thirty, after the liquor is prepared, in two hours.

Vinegar Tree.

We have the molasses or sugar tree among us in the shape of the rock or sugar maple, which many of our farmers make use of to good advantage, and many more might, did they know how to improve the good things which Providence has supplied them with. In addition to this, we have undoubtedly, a good *vinegar tree*, though we have never tried the experiment in order to ascertain the facts, and the time may now, perhaps, be past for doing it this year. While perusing the last number of Silliman's Journal of Science, we were struck by the following remark from Prof. F. Emmet, while speaking of the properties of Formic acid,—"Being lately very much struck with the odor peculiar to the red oak, I applied my lips closely to the transverse section of some fresh cut logs, and, to my astonishment, sucked up with ease, a pure and grateful vinegar, sharp to the taste, and so like the bests pecimens of the acetic acid, that distillation could not have improved its qualities. The tree was full grown and sound, and felled in the month of February about the 6th, and the wood examined as soon as cut. The acetic acid existed more abundantly in the red portion next to the heart."

Now it is well known that the sap in the red oak is abundant, perhaps as much so as in the maple. Would it not, if tapped at the time the maple is, yield a quantity of pure vinegar sufficiently large to supply a family for a considerable part of, or for the whole year? We wish some one who has an opportunity would try the experiment, and let us know the result. The acetic acid is much used in the arts, and if it can be obtained in this simple way, of a good quality, it will be a discovery of considerable importance.—*Maine Farmer.*

Agriculture.

It is very evident that for a few years past the Agriculture of America has been rising in the scale of human employments; its rewards have been greater than were ever realised before. We do not mean that a given quantity of farmer's produce has sold for more *dollars* than it ever commanded before, but that with a given amount of labor the farmer is enabled to produce a geater amount of *wealth*, to command a greater amount of the substantial comforts and conveniences of life.

A glance at the causes of this appreciation of agricultural industry, will convince us that it is destined to be permanent.

There is no apprehension that our agriculture will ever degenerate, and fall back to the unskilful, inefficient labor of the half barbarous cultivator with his wooden spade.

As far as the prosperity of this leading occupation depends upon a skilful and judicious cultivation of the earth, it is not only certain not to recede, but to advance.

But the prosperity of the agriculturist is promoted not only by improvements in the processes of his own art, but by improvements in all other arts. The products of agriculture, being articles of prime necessity, have at all times nearly the same intrinsic value. But their exchangeable value varies very greatly. Before the invention of the spinning jenny and the power loom, a bushel of wheat might have paid for two and a half yards of cotton cloth of a given quality; whereas now a bushel of wheat will buy six or seven yards of a fabric of equal or better quality. So a great number of other manufactures have contributed to increase the *exchangeable value* of agricultural produce. And it is obvious that these advantages are as permanent as the applications of mechanical power that have given birth to them. The present improved processes in the manufacture of useful fabrics will never be abandoned unless still better are discovered.

It is the growth of various manufactures in our own and other countries, and the improved means of transportation by which these manufactures are brought to our doors, that have chiefly contributed to secure a better reward for agricultural industry.

Finally, agricultural industry was greatly elevated when the plough was substituted for the spade. Its condition was still further improved when the several kinds of labor were divided, and mechanical expertness acquired in the various arts. It advanced still farther, (and of this last melioration we have by no means reached the utmost extent,) when labor-saving machinery was generally introduced in the manufacturing arts.—*Detroit Journal.*

Millet.

This grain may be sown any time between the middle of May and the middle of July, and will make you a heavy crop of hay in six weeks, say from 2 to 4 tons to the acre. If you design it for hay alone, as soon as the head is formed, you should cut it; cure it in cocks, and you will have a hay more nutritious than any other. It cures easily, keeps well, and is eaten with avidity by either horses or cattle.

If you want to obtain the grain, let it remain a few days longer until the head turns yellow; then cut; thresh out the seed, when dried, and stack or stow away your hay. When the seed is permitted to ripen, the hay, of course, is harsher, but is still a highly nutritious provender for stock of all kinds.

If you desire hay only, you may sow from three pecks to a bushel of the seed; if for both grain and hay, from two to three pecks will be sufficient.

Corn.

If there be any who may have put in their corn without being able to manure their ground, from want of time, who may have manure at command, we would advise them still to give it a dressing, either before the grain comes up, or just after it has done so.

Those who may live upon tide water, where the sea-weed washes ashore, have a certain resource in that article to insure a good yield of corn, and by taking a little trouble may add 25 per cent. to their product: in ploughing their corn the first time, let the furrow be turned from the stalks on either side; let the cart follow the plough with the sea-weed, put in a shovel full of it around the stalks in the furrow, then let the plough return the soil, covering up the sea-weed, and they may rest assured the happiest results will crown their labors.

Those who have not this resource, have an equal fertilizer in the mould and leaves from the woods, which, if applied in the same way, would act equally efficient. So also would well rotted manure of any kind.

But should there be any who are so situated, as not to be able to encounter this trouble, we would advise them to a less laborious course. Let them mix ten bushels of spent ashes with one of plaster, and cast a common sized kitchen ladleful upon each hill soon after the corn is up.

If there should be any who may not be able to obtain the ashes, an ordinarily sized tablespoonful of plaster to each hill, will act as a charm, if put around and on the plants, when they first come up.—*Farmer and Gardener.*

Manufacture of Beet Sugar in France.

The French Minister of Finances in his report recently made, states the manufacture of beet sugar in France to be as follows:

In 1835—668,936,762 lbs.
" 1836—1,012,770,589 lbs.

That the value of the raw sugar from the harvest of 1835, was 30,349,340 francs. That of 1836, 48,968,805 francs.

The number of manufactories now at work in the making of beet sugar is 512: besides these there are 39 being erected.

By this exhibit it will be seen, that public confidence in this branch of agricultural industry, is steadily on the increase in France; which fact should inspire those engaged in the pursuits of husbandry in America, with a like confidence; and we sincerely hope, that every farmer and planter will feel himself justified in putting in more or less of the seed, with a view of ultimately adding this to the other branches of his culture. When so many disasters have followed the exertions of the wheat-growth for the last four years,—when the price of cotton has so greatly fallen,—when its sales have been so precarious—and when so little profit has recently ensued to the tobacco planters, surely each and all of them should look around them with a view of embracing other pursuits; and to us it appears clear, that none which promises surer prospects of success and profit could be desired than those of the beet and mulberry culture. Blessed with soil and climate both happily adapted to their growth, how easy a matter will it be, for any one so disposed, to embrace either, or both branches, upon a small scale, without materially affecting those which now form the staple articles of their growth.—*Ib.*

Ewes and Lambs.

Farmers sometimes experience a difficulty in making ewes own their lambs; and oftener perhaps when cases of twin lambs occur than at other times. When sheep are as valuable as at present, those who desire to rear all their lambs may find a benefit in sprinkling a little fine salt over the disowned lamb. This will usually attract the mother, and when once the operation of licking has been performed, there is usually but little danger of desertion. A friend assures us he has practiced this method with decided success; and no injury to the lambs need be apprehended from the application. Sheep, when about to lamb, should be moved and disturbed as little as possible; as all such disturbance, especially with young or wild ewes, greatly increases the probability of their forsaking their young. Ewes in the spring of the year should be kept by themselves, and fed with grain or roots in such a manner as to make them less fearful, as well as to keep them in good heart.—*Genesee Farmer.*

For the Farmers' Cabinet.

Farmers' Song, for 1837.

While the commercial world doth rock,
And feel the earthquake's power—
We only *hear* the distant shock,
Which deepens every hour.

While Merchants' notes suspended lie,
Nor Banks their specie yield—
The plough still merrily *we* ply,
And still enrich the field!

While anxious brows, and faces pale,
Like spectres fill the town—
We speed our toils with look so hale,
'Twould ill befit the frown.

While Parsons, Squires, and Doctors all
Must whistle for their fees—
Earth's credit has no rise and fall,
The Farmer rests at ease:

Not ease like that which sluggards love,
As sweat of brow will show;
But rest of mind! 'tis this we prove,
The sweets of *this* we know.

What if we *sell* not as before?
Our lands still yield their crop;
We shall not starve!—and what's still more—
May cheer the sufferer's hope!

With 'food and raiment,' we're content,
And if God smiles, they 're ours—
For both through fields and flocks are sent,
With honey from the flowers.

So thanks to Him who gave our lands,
And makes us differ now—
From those who gaze on empty hands,
Or 'neath misfortune bow.

Plainfield, N. J. CLEMENTINA.

PRICES CURRENT.

ARTICLES.	Philadelphia, May 29.	Baltimore. May 25.	New York, May 29.	Boston, May 26.
Beans, white, per bush.	$1 37—1 62	1 50—1 75	1 75—2 00	3 00—4 00
Beef, mess, new, per bbl.	14 00–15 00	.....	13 50–14 50	15 50–16 50
Bacon, western, per lb.	7½— 10	8— 9	8— 10	.....
Butter, extra, per tub	14— 16	.....	17— 19	20 — 25
Butter, fresh, per lb. (market,)	25— 31	25— 37½	25— 38	.....
Hams, per lb.	9— 13	10— 12	10— 12	14— 15
Hog's Lard, per lb.	8— 10	10— 12	8— 9	10— 11
Cheese, American, per lb.	10½— 11½	.....	10— 12	10— 12
Beeswax, yellow, per lb.	25— 27	.....	23— 25	25— 30
Beeswax, white,	.....	.....	38— 40	38— 40
Bristles, American,	.....	.....	25— 65	.....
Flax, American,	.....	.....	.....	9— 12
Flour, best, per bbl.	8 75—9 00	8 00—9 00	9 00—9 25	8 50—9 25
GRAIN—Wheat, per bush. Penna.	2 00—2 10	.....	.....	.....
do. Maryland,	1 75—1 95	.....	.....	.....
Rye, per bushel,	1 00—1 10	90—	—1 10	1 07—1 10
Corn, do.	90— 94	85— 86	90— 95	90—1 08
Oats, do.	50— 53	45— 46	50— 60	62— 65
Barley, do. Penn.	80— 90	.....	.....	1 00—1 10
Peas do.	1 00—1 25	1 12½—	.....	.....
HAY, Timothy, per 100 lbs.	1 05—1 20	15 00 pr. ton,	.....	22 50 pr ton.
Meadow Grass,	70— 90	.....	.....	.....
Hemp, American dry rot, ton,	175 00–	.....	—140	.....
Hops, first sort, 1836, lb.	9 — 10	— 16	7½— 8½	6— 7
Plaster Paris, per ton,	2 75—3 00	4 75—4 87	.....	3 75—4 00
SEEDS—Cloverseed, per bushel,	5 00—6 25	6 50—6 50	.....	.....
Flaxseed, rough, do.	1 40—	1 37—1 50	.....	.....
Timothy,	2 25—2 75	3 00—3 50	.....	2 87—3 12
Tallow, per lb.	8— 10	— 8½	9— 10	12— 13
WOOL—Saxony, fleece, per lb.	65— 73	50— 60	75— 80	70— 75
Merino,	58— 62	45— 50	50— 68	65— 70
1-4 and common,	40— 44	33— 36	35— 45	45— 50

NOTE —The above prices are merely nominal—the panic caused by the suspension of specie payments by the Banks, is beginning to subside.

Preserving Pumpkins.

A correspondent at Union Bridge, Maryland, under date of May 9th, says—"in looking over the Farmers' Cabinet to-day, I find a request from one of your subscribers for information as to the best method of preserving pumpkins through the winter. I answer, that the way to preserve them for one or more years, is, to pull them before the frost comes on, and keep them in a warm dry room. This is my method, and I have now several large ones in my house, in a fine state of preservation; and my neighbor, Mr. Davis Lightner, one of your subscribers, has them two years old at this time, weighing 43 pounds, each. They are very fine."

Short Horn Cattle.

A distinguished American agriculturist, now in Europe, has prevailed upon Mr. J. Whitaker, of Yorkshire, England, to send a part of his superior herd of Durham Short Horns to this country, for sale by auction, and that they may be expected to arrive early this summer. The sale will take place in the neighborhood of Philadelphia. Mr. Whitaker is the most celebrated and successful breeder of "Durham Short Horns" in England, and it is principally from his stock that Colonel Powell and the Ohio Importing Company have made their best selections for some years past. They are universally acknowledged to be the finest cattle ever brought to this country. A rare chance will, therefore, soon be offered for obtaining choice and pure animals, without the risk or expense of a sea voyage.

THE FARMERS' CABINET,

A semi-monthly newspaper, is published by

MOORE & WATERHOUSE, No. 67 SOUTH SECOND STREET, PHILADELPHIA.

JOHN LIBBY, PITTSBURG, PA.

The Cabinet is published on or about the first and fifteenth of each month. Each number will contain 16 octavo pages on good paper and fair type. The subjects will be illustrated by engravings on wood whenever they can be appropriately introduced. TERMS.—*One dollar per year, payable in advance.* The Cabinet, by the decision of the Post Master General, is subject only to *newspaper postage*; that is one cent on each number within the state, and within one hundred miles of Philadelphia, out of the state,—one cent and a half on each number to any other part of the United States. ☞ Six copies for five dollars. All subscribers must commence with the volume No. 1. or with the half volume No. 13.

J. Van Court Printer, corner of Bread and Quarry St. rear of 96 N. Second.

DEVOT

Vol. I.

A

THE REVO

This m
only in sa
saving pr
otherwise
but for wa
both in ma
for useful
paired.
be made
should be
and in ex
can easil
way so a
be more
perience
machine
than th
dinary c

The
of one
tice a p
be varie
instanc
usual,
is smo
to dou
two ho
all the
the tee
teeth h
to cau
or sto
with
dinary

A
easily
Ches

CA